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EXAMINER

ROBINSON BOYCE, AKIBA K

ART UNIT

PAPER NUMBER

3639

DATE MAILED: 08/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/893,706

Applicant(s)

IKEDA, SABUROU

Examiner

Akiba K. Robinson-Boyce

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/28/03, 6/29/01.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Status of Claims

1. Due to communications filed 6/29/01, the following is a non-final first office action. Claims 1-23 are pending in this application and have been examined on the merits. Claims 1-23 are rejected as follows.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claim 17-20, and 23 are rejected under 35 U.S.C. 101 because the claimed invention is directed to a non-statutory subject matter.

The basis of this rejection is set forth in a two-prong test of :

- (1) whether the invention is within the technological arts; and
- (2) whether the invention produces a useful, concrete, and tangible result.

For a claimed invention to be statutory, the claimed invention must be within the technological arts. Mere ideas in the abstract (i.e., abstract idea, law of nature, natural phenomena) that do not apply, involve, use, or advance the technological arts fail to promote the "progress of science and the useful art" (i.e., the physical sciences as opposed to social sciences, for example) and therefore are found to be non-statutory subject matter. For a process claim, the recited process must somehow apply, involve, use, or advance the technological arts.

In the present case, the preamble of claim 15 recites "a toll payment method using a portable telephone on a car of a contractor of electronic toll payment service, base stations connected with said portable telephone and a server connected with said base stations". This claim produces a useful, concrete, and tangible result, however, since no computer hardware or software embodied on a tangible medium are in the body of the claim, claim 17 is therefore non-statutory.

In the present case, the preamble of claim 18 recites "a toll payment method using a portable telephone with GPS unit on a car of a contractor of electronic toll payment service, base stations connected with said portable telephone and a server connected with said base stations". This claim produces a useful, concrete, and tangible result, however, since no computer hardware or software embodied on a tangible medium are in the body of the claim, claim 18 is therefore non-statutory.

In the present case, the preamble of claim 19 recites "A computer program product fro executing a toll payment method using a portable telephone on a car of a contractor of electronic toll payment service, base stations connected with said portable telephone and a server connected with said base stations". This claim produces a useful, concrete, and tangible result, however, since no computer hardware or software embodied on a tangible medium are in the body of the claim, claim 19 is therefore non-statutory. In addition, the preamble of claim 19 recites "A computer program product...", however, this computer program product is not executable by a computer, therefore making the claim statutory.

In the present case, the preamble of claim 20 recites "a toll payment method using a portable telephone with GPS unit on a car of a contractor of electronic toll payment service, base stations connected with said portable telephone and a server connected with said base stations". This claim produces a useful, concrete, and tangible result, however, since no computer hardware or software embodied on a tangible medium are in the body of the claim, claim 20 is therefore non-statutory. In addition, the preamble of claim 20 recites "A computer program product...", however, this computer program product is not executable by a computer, therefore making the claim statutory.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-20, and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Treyz et al (US 6,711,474), and further in view of Hassett (US 6,653,946).

As per claim 1, Treyz et al discloses:

a portable telephone on a car of a contractor of electronic toll payment service, (col. 45, lines 50-54, wireless telephone);

base stations connected with said portable telephone, (Col. 11, lines 3-10, base stations); and

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a server connected with said base stations, (col. 17, line 66-Col. 18, line 3, and Fig. 2, personal computer connected to the base station via wireless connection);

wherein said server comprises:

a first memory for storing locations of said base stations, (Col. 44, lines 15-22, corresponding street address that is stored);

a second memory for storing names of contractors or their car numbers and unit toll for each section along a highway, (col. 78, lines 8-10 and lines 27-30, digital camera capturing images of license plates in memory of personal computer, col. 55, lines 3-9, toll information on region's requirements are stored);

a driving route identification unit for identifying a driving route of said portable telephone/car on the basis of said locations of said base station which are connected with said portable telephone, (Col. 59, lines 7-19, determined itineraries [or routes]);

a toll charging unit for charging said portable telephone the calculated toll, (Col. 46, lines 35-41, toll payment occurs via wireless transmission).

Treyz et al does not disclose a toll calculation unit for calculating a toll on the basis of said unit toll and the identified driving route, but does disclose a GPS system that tracks the location of an automobile in col. 48, lines 33-35, and also discloses calculating the fee owed by the user at a parking facility in col. 48, line 67-col. 49, line 1.

However, Hassett discloses:

a toll calculation unit for calculating a toll on the basis of said unit toll and the identified driving route, (Col. 4, lines 31-33, toll amount depends upon where the vehicle enters and where it exits the tollway). Hassett discloses this limitation in an analogous

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art for the purpose of showing that the toll calculated is based upon the route the vehicle has traveled.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to calculate a toll on the basis of said unit toll and the identified driving route with the motivation of showing that a toll is contingent upon the itinerary the user uses.

As per claim 2, Treyz et al discloses:

a portable telephone on a car of a contractor of electronic toll payment service, (col. 45, lines 50-54, wireless telephone);

base stations connected with said portable telephone, (Col. 11, lines 3-10, base stations); and

a server connected with said base stations, (col. 17, line 66-Col. 18, line 3, and Fig. 2, personal computer connected to the base station via wireless connection);

wherein:

said portable telephone comprises GPS unit for identifying its location, (col. 11, lines 43-47, GPS)

said server comprises:

a second memory for storing names of contractors or their car numbers and unit toll for each section along a highway, (col. 78, lines 8-10 and lines 27-30, digital camera capturing images of license plates in memory of personal computer, col. 55, lines 3-9, toll information on region's requirements are stored);

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a driving route identification unit for identifying a driving route of said portable telephone on the basis of said locations measured by said GPS unit, (Col. 59, lines 7-19, determined itineraries [or routes]);

a toll charging unit for charging said portable telephone the calculated toll, (Col. 46, lines 35-41, toll payment occurs via wireless transmission).

Treyz et al does not disclose a toll calculation unit for calculating a toll on the basis of said unit toll and the identified driving route, but does disclose a GPS system that tracks the location of an automobile in col. 48, lines 33-35, and also discloses calculating the fee owed by the user at a parking facility in col. 48, line 67-col. 49, line 1.

However, Hassett discloses:

a toll calculation unit for calculating a toll on the basis of said unit toll and the identified driving route, (Col. 4, lines 31-33, toll amount depends upon where the vehicle enters and where it exits the tollway). Hassett discloses this limitation in an analogous art for the purpose of showing that the toll calculated is based upon the route the vehicle has traveled.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to calculate a toll on the basis of said unit toll and the identified driving route with the motivation of showing that a toll is contingent upon the itinerary the user uses.

As per claims 3, 4, Treyz et al discloses:

Wherein said server comprises gate means for passing said car on the basis of finishing said toll payment, (COL. 49, lines 1-3, gate opened).

As per claims 5, 6, Treyz et al discloses:

Wherein said server comprises notification means for notifying said portable telephone of an exit lane on the basis of finishing said toll payment, (col. 37, lines 12-35, wireless communication takes place with automobile personal computer [which is shown to contain a phone] when user drifts out of lane).

As per claim 7, Treyz et al discloses:

Wherein said driving route identification unit identifies said driving route of said portable telephone on the basis of connection states between said mobile station and said base stations, (Col. 59, lines 7-19, starting point of driving user and destined location).

As per claim 8, Treyz et al discloses:

Wherein said base stations are connected with said portable telephone located at a tunnel, toll gate, or a service area along said driving route, (Col. 44, line 61-Col. 45, line 4, communication link established at toll collection facility).

As per claims 9, 10, 22, Treyz et al does not disclose wherein said driving route identification unit identifies said driving route of said portable telephone on the basis of connection states between said portable telephone and a base station which includes a region where an exterior magnetic wave is shielded, but can be connected with said portable telephone/wherein said driving route is identified on the basis of the location stored in said first memory of the radio base station which includes section where exterior electromagnetic wave is shielded, but can be connected with said portable telephone, but does disclose the identification of a driving route in col. 59, lines 7-19.

However, Hassett discloses:

Wherein said driving route identification unit identifies said driving route of said portable telephone on the basis of connection states between said portable telephone and a base station which includes a region where an exterior magnetic wave is shielded, but can be connected with said portable telephone/wherein said driving route is identified on the basis of the location stored in said first memory of the radio base station which includes section where exterior electromagnetic wave is shielded, but can be connected with said portable telephone, (Col. 2, lines 56-66, blanking field). Hassett discloses this limitation in an analogous art for the purpose of showing that the toll transceiver is shielded in certain situations.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to identify the driving route of said portable telephone on the basis of connection states between said portable telephone and a base station which includes a region where an exterior magnetic wave is shielded and wherein said driving route is identified on the basis of the location stored in said first memory of the radio base station which includes section where exterior electromagnetic wave is shielded, but can be connected with said portable telephone, but can be connected with said portable telephone with the motivation of blocking out transmission signals in certain areas.

As per claims 11 and 12, Treyz et al does not disclose wherein said toll charging means charges said calculated toll when a balance for said portable telephone is greater than said calculated toll, but does disclose the amount of a toll versus the user's current account in col. 55, lines 28-31.

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However, Hassett discloses:

wherein said toll charging means charges said calculated toll when a balance for said portable telephone is greater than said calculated toll, (Abstract, lines 11-13, low balance incremented for billing purposes). Hassett discloses this limitation in an analogous art for the purpose of showing that the balance must be higher in order to enforce billing.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to charge said calculated toll when a balance for said portable telephone is greater than said calculated toll with the motivation of charging the user an amount that he or she is able to pay.

As per claims 13 and 14, Treyz et al does not disclose wherein said toll charging means charges said calculated toll, when said portable telephone communicates with said base stations every prescribed time interval, but does disclose the amount of a toll versus the user's current account in col. 55, lines 28-31, and that information is gathered and provided to the server via wireless link at regular intervals in col. 80 lines 39-44..

However, Hassett discloses:

wherein said toll charging means charges said calculated toll, when said portable telephone communicates with said base stations every prescribed time interval, (Col. 2, lines 62-63, requires vehicle to transmit toll within a predetermined time limit). Hassett discloses limitation in an analogous art for the purpose of showing that there is a time limit on the collection of tolls.

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It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to charge said calculated toll, when said portable telephone communicates with said base stations every prescribed time interval with the motivation of having a guaranteed time that tolls will be collected.

As per claims 15 and 16, Treyz et al discloses:

wherein said server further comprises a third memory for storing an ID of said portable telephone, wherein said name of contractor and its car ID are identified by said ID of said portable telephone, (col. 32, lines 30-34 and lines 45-53, license plate information and user's name are used to identify the user's personal computer).

As per claims 17, 19, Treyz et al discloses:

storing names of contractors or their car numbers and unit toll for each section along a highway, (col. 78, lines 8-10 and lines 27-30, digital camera capturing images of license plates in memory of personal computer, col. 55, lines 3-9, toll information on region's requirements are stored);

identifying a driving route of said portable telephone on the basis of said locations of said base station which are connected with said portable telephone, (Col. 59, lines 7-19, determined itineraries [or routes]);

charging said portable telephone the calculated toll, (Col. 46, lines 35-41, toll payment occurs via wireless transmission).

Treyz et al does not disclose calculating a toll on the basis of said unit toll and the identified driving route, but does disclose a GPS system that tracks the location of

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an automobile in col. 48, lines 33-35, and also discloses calculating the fee owed by the user at a parking facility in col. 48, line 67-col. 49, line 1.

However, Hassett discloses:

calculating a toll on the basis of said unit toll and the identified driving route, (Col. 4, lines 31-33, toll amount depends upon where the vehicle enters and where it exits the tollway). Hassett discloses this limitation in an analogous art for the purpose of showing that the toll calculated is based upon the route the vehicle has traveled.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to calculate a toll on the basis of said unit toll and the identified driving route with the motivation of showing that a toll is contingent upon the itinerary the user uses.

As per claims 18, 20, Treyz et al discloses:

storing names of contractors or their car numbers and unit toll for each section along a highway, (col. 78, lines 8-10 and lines 27-30, digital camera capturing images of license plates in memory of personal computer, col. 55, lines 3-9, toll information on region's requirements are stored);

identifying a driving route of said portable telephone on the basis of said locations measured by said GPS unit, (Col. 59, lines 7-19, determined itineraries [or routes], w/ col. 11, lines 43-47, GPS);

charging said portable telephone the calculated toll, (Col. 46, lines 35-41, toll payment occurs via wireless transmission).

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Treyz et al does not disclose calculating a toll on the basis of said unit toll and the identified driving route, but does disclose a GPS system that tracks the location of an automobile in col. 48, lines 33-35, and also discloses calculating the fee owed by the user at a parking facility in col. 48, line 67-col. 49, line 1.

However, Hassett discloses:

calculating a toll on the basis of said unit toll and the identified driving route, (Col. 4, lines 31-33, toll amount depends upon where the vehicle enters and where it exits the tollway). Hassett discloses this limitation in an analogous art for the purpose of showing that the toll calculated is based upon the route the vehicle has traveled.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to calculate a toll on the basis of said unit toll and the identified driving route with the motivation of showing that a toll is contingent upon the itinerary the user uses.

As per claim 23, Treyz et al discloses:

storing a name of contractor of said portable telephone and a number of car of said contractor and tolls for each section, col. 78, lines 8-10 and lines 27-30, digital camera capturing images of license plates in memory of personal computer, col. 32, lines 30-34 and lines 45-53, both license info and user's name used to uniquely identify the user's personal computer);

identifying a driving route of said car on the basis of the location of the radio base station connected with said portable telephone... (Col. 59, lines 7-19, determined itineraries [or routes]);

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Treyz et al does not disclose particularly identifying said driving route on the basis of the location stored in said first memory of the radio base station which includes a section where exterior electromagnetic wave is shielded, but can be connected with said portable telephone, but can be connected with said portable telephone/wherein said driving route is identified on the basis of the location stored in said first memory of the radio base station which includes section where exterior electromagnetic wave is shielded, but can be connected with said portable telephone, but does disclose the identification of a driving route in col. 59, lines 7-19.

However, Hassett discloses:

particularly identifying said driving route on the basis of the location stored in said first memory of the radio base station which includes a section where exterior electromagnetic wave is shielded, but can be connected with said portable telephone, (Col. 2, lines 56-66, blanking field). Hassett discloses this limitation in an analogous art for the purpose of showing that the toll transceiver is shielded in certain situations.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to particularly identifying said driving route on the basis of the location stored in said first memory of the radio base station which includes a section where exterior electromagnetic wave is shielded, but can be connected with said portable telephone with the motivation of blocking out transmission signals in certain areas.

Claim Rejections - 35 USC § 102

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6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claim 21 is rejected under 35 U.S.C. 102(e) as being anticipated by Treyz et al (US 6,711,474).

As per claim 21, Treyz et al discloses:

a portable telephone, (col. 45, lines 50-54, wireless telephone);

radio base stations connected with said portable telephone in their communication areas, (Col. 11, lines 3-10, base stations);

a server connected with said radio base stations, (col. 17, line 66-Col. 18, line 3, and Fig. 2, personal computer connected to the base station via wireless connection);

wherein said server comprises:

a first memory for storing said radio base stations and their locations, (Col. 44, lines 15-22, corresponding street address that is stored);

a second memory for storing a name of contractor of said portable telephone and a number of car of said contractor, (col. 78, lines 8-10 and lines 27-30, digital camera capturing images of license plates in memory of personal computer, col. 32, lines 30-34 and lines 45-53, both license info and user's name used to uniquely identify the user's personal computer); and

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a driving route identification unit for identifying a driving route of said car on the basis of the location stored in said first memory of the radio base station connected with said portable telephone, (Col. 59, lines 7-19, determined itineraries [or routes]);

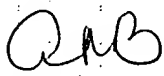
a toll charging unit for charging said portable telephone the calculated toll, (Col. 46, lines 35-41, toll payment occurs via wireless transmission).

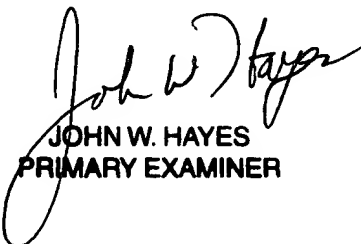
Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Akiba K Robinson-Boyce whose telephone number is 571-272-6734. The examiner can normally be reached on Monday-Tuesday 8:30am-5pm, and Wednesday, 8:30 am-12:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Hayes can be reached on 571-272-6708. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7238 [After final communications, labeled "Box AF"], 703-746-7239 [Official Communications], and 703-746-7150 [Informal/Draft Communications, labeled "PROPOSED" or "DRAFT"].

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.


A. R. B.
August 4, 2005


JOHN W. HAYES
PRIMARY EXAMINER